

## UNDERSTANDING THE ASSOCIATION BETWEEN PANDEMIC PROTOCOL ADHERENCE AND NEED FOR PROTOCOL IMPROVEMENT IN THE HIGHER EDUCATION SYSTEM

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### ABSTRACT

*The COVID 19 pandemic has led to a significant shift in the culture of educational institutes. Online classes became the norm for a while, and leaving the confines of one's abode was met with trepidation. While it was essential to attend classes online, with the third wave of COVID 19 looming over the horizon, one has to consider the effectiveness of such an arrangement. There are some things online classes can't provide, and the dissonance that arises from the emergence of multiple formats of schooling is exacerbated by the reality that offline classes have been the predominant form of schooling in India for a long time. As such, certain sects of people may prefer one form to another. Offline classes also have other complications to consider. If classes were to be held offline, the current situation mandates the usage of N95 masks; staff and students alike are required to properly adhere to the protocol. This can in turn shed light on the need for protocol improvement. The goal of this paper is to identify the preferred mode of study and to correlate protocol adherence with improvement.*

**KEYWORDS:** COVID 19, Change Management. Mode of Study, Online, Offline, Protocol Adherence & Protocol Improvement

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### 1. INTRODUCTION

With the advent of the COVID-19 pandemic, there were a lot of changes to the education system. One important change was the adoption of online learning as a substitute for campus-based learning. This solution, however, was not permanent; some institutes in India once again opened the doors to campus-based learning for a few grades and it resulted in new cases (Suresh, 2022). These cases warrant the re-examination of the efficiency of the Covid-19 protocols that are most commonly practiced.

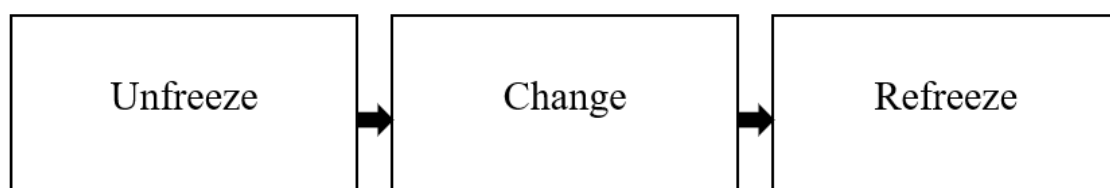
The renewal of old teaching methods has also come with some new changes that must be upheld to maintain a safe environment. This includes following the proper norms, like getting vaccinated, social distancing, mask-wearing and sanitization. The strength of students is greatly reduced as students arrive to schools in shifts to minimize contact (Arakal, 2020). Despite the inconsistent nature of the reopening, which can be attributed to the unpredictable nature of the pandemic, there is a concerted effort by many institutes to make the lessons more engaging, and this has led to institutes following protocols to minimize the spread of the COVID-19 virus, but with mixed results.

The newly emergent third wave, with the Omicron variant of the virus, has severely limited the potential for in-person learning but there is still potential in direct interaction, as long as the various guidelines are followed

judicially to keep the virus levels at minimum. It is the responsibility of every student and parent to cooperate with the government mandates to ensure the efficiency of these protocols (Herpich, 2022). The plans for the future are not certain, but in-person learning is still a priority once the severity of the virus has declined. In fact, a lot of reputed colleges still value in-person learning, and the safety of the students attending is trusted entirely on regular practice of the protocols (Quintana, 2022).

When it comes to pandemic protocols, there are a number of small steps that anyone can follow without hampering their daily activities. Of these, the often-highlighted guidelines are the above-mentioned procedures of vaccination, social-distancing, mask-wearing and sanitization, which are practiced all over the world. These basic guidelines help to lessen the impact of the virus with slight adjustments to everyday lives and it is important to know their effectiveness and areas of improvement.

### 1.1 Lewin's Change Model



**Figure 1: Lewin's change Model.**

Lewin's change model, reconstructed by the authors

Change management is defined as 'the process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers' (Moran and Brightman, 2001). Organizations make use of several main change management models, and Lewin's Change Management Model is one such model. The following research uses Kurt Lewin's 3-Stage Change Model as reference. Lewin's model describes three steps that every change is accompanied by: unfreeze, change and refreeze

When it comes to the education system during Covid-19, the entire system had to unfreeze in order to implement the pandemic protocols. As the status quo changed, it was necessary to inform the students and staff about the new ways of learning and the steps taken to make them possible. Communication was done through campus management platforms as well as official emails. The class representatives worked together with the administration staff to ensure that every person got the right information about the changes in learning, whether it was hybrid or offline sessions. The messages were also sent through informal groups formed using the WhatsApp platform.

Once the situation was established, it was time for the actual change process to take place. This was apparent by the need for adapting teaching techniques that arose out of the switching the mode of delivery. The change was implemented in the form of online and hybrid classes, which sought to continue the act of teaching despite the physical barrier that had to be maintained. Another way of implementing the change came in the form of pandemic protocols, which drastically changed the way people interacted with one another. These changes were difficult to maintain and kept changing every time.

In the refreeze stage, the change has to be maintained. Stability in the organization has to be built up following the change, to ensure that it is effective. This stage was not that well enforced by the institutions due to the unpredictable nature of the pandemic affecting the learning process of the students, which in turn required various accommodations that kept changing according to the times. New COVID-19 variants complicated the stability even further. Therefore, there needs to be an understanding regarding student's preferred mode of study and regarding how their adherence to protocols enforces their belief for protocol improvement. Only then, a consensus can be reached for a proper and stable change management.

## **2. LITERATURE REVIEW**

### **2.1 Background**

After COVID-19 started emerging, there was an increased focus on online learning in order to ensure the safety of the students. Since, most students were already familiar with smartphones and social media, the transition to digital learning was somewhat easy (Mishra, Gupta and Shree, 2020). Use of technology had become the norm (U and Unni, 2020). Zoom and Google Meet were the most common communication channels used (Mishra, Gupta and Shree, 2020; Budur, Demir and Cura, 2021). But the teachers still needed to train themselves for this new way of teaching. Sessions were conducted online and new courses were introduced. In India, these included certifications like the Massive Open Online Courses (MOOCS) (Mishra, Gupta and Shree, 2020). The government encouraged learning through such free online courses with the popularization of SWAYAM and SWAYAM PRABHA, platforms that held curated courses on a wide range of topics (Rathee and Sarkar, 2020; Jena, 2020).

### **2.2 Challenges to the Education System**

With the introduction of online learning, there came new challenges both the teachers and students had to face. Network connection was once such issue. Class interaction was severely hampered by unstable internet connection (Mishra, Gupta and Shree, 2020; Aini, Budiarto, Putra and Rahardja, 2020). Another problem was that teachers were unable to read the students faces, to know how well they had understood the concept being taught (Mishra, Gupta and Shree, 2020). Lack of motivation and isolation, coupled with untrained staff posed even more problems (Aini, Budiarto, Putra and Rahardja, 2020). In addition to the above-mentioned problems, there were also financial problems faced by some schools, as they could not afford the technology needed for online learning (Almaiah, Al-Khasawneh and Althunibat, 2020; Aini, Budiarto, Putra and Rahardja, 2020). This was as a result of cost-cutting and loss of income (Carnegie, Guthrie and Martin-Sardesai, 2021). COVID-19 further exacerbated the inequality of education, with more cases of marginalization, disempowerment and displacement (Rabbanikhah, Khanbabaei and Zaker Salehi, 2020; Watermeyer, Crick, Knight and Goodall, 2020).

Analysis reveals that most institutions, especially public institutes, had not prepared well to handle the change to online learning. This can be attributed to the lack of cultural readiness and the sudden nature of the pandemic (Budur, Demir and Cura, 2021).

In some cases, institutes have opened their gates, in order to tackle the issues with online learning. These institutes follow certain measures to ensure the safety of the students (Narmada and Somasundaram, 2020).

### **2.3 Pandemic Protocols**

The worldwide pandemic drastically affected social norms and, as a result, a set of ground rules had to be developed for public gatherings. These guidelines enforced the importance of prevention protocols in various forms, and most of these

protocols involved simple, low-effort steps to be effective.

## **2.4 Vaccination and Testing**

One way to minimize the effect of the pandemic is to ensure that every person has tested for the virus and has been administered the vaccine. The development of the vaccine was fast because extensive research and large investments enabled the development of effective vaccines. The rollout strategy varied from country to country. Some countries preferred to vaccinate everyone quickly while others preferred vaccinating the helpless communities first (Pettersson et al., 2022).

### **2.4.1 Social Distancing**

Social distancing involves closing oneself off from contact, and it usually entails staying at home or self-quarantine. But with the reopening of public places like institutions, physical distancing has become the new norm, where individuals are to maintain a physical distance of at least six feet in public areas (Maragakis, 2022).

### **2.4.2 Mask Wearing**

Covid-19 spreads via the air, through droplets that arise out of sneezing, talking, coughing and even breathing. Masks play an important role in reducing the transmission of the virus by acting as a barrier between the droplets and the respiratory system. Masks with multiple layers of fabric also provide filtration. Masks are beneficial not only for infected users but also for the uninfected ones. When it comes to the types of masks, surgical masks are preferable to simple cloth masks, although there are certain cloth masks which are comparable to surgical masks (Brooks & Butler, 2021).

### **2.4.3 Sanitization**

Indirect spreading of Covid-19 virus happens through human interaction and contact with objects and surfaces. Sanitization can be classified into individual, space and object sanitization, based on the mode of transmission. Individual sanitization consists of hand and oral hygiene, using alcohol-based disinfectants. Surface sanitization is done by mopping, spraying and treating the contaminated surface with UV LED rays. The ambience is cleansed with the help of air purifiers that help with fogging, fumigating, ventilating and filtering contaminated air. These methods can be applied to purifying objects as well (Khan & Yadav, 2020).

While there are a lot of papers discussing the change to online learning, there are less papers discussing in-person learning post COVID-19. This paper aims to focus on the association between the adherence to the pandemic protocols and the need for their improvement.

## **3. OBJECTIVES OF THE STUDY**

- To understand the preferred mode of study in the COVID-19 pandemic.
- To associate the adherence to the pandemic protocols with the need for protocol improvement.

## **4. METHODOLOGY**

The study uses a mixed approach to analyze and collect opinions and suggestions regarding the preferred mode of study and the correlation between protocol effectiveness and its need for improvement in different higher education institutions.

#### 4.1 Research Plan

The following study involves descriptive research. An online survey was utilized for data collection, and from these responses, the most usable responses were used for the analysis. A questionnaire was used as the tool for research.

#### 4.2 Sample Plan

Non-probabilistic sampling was used as the sampling design. The sampling size is 48, consisting of the most usable responses.

#### 4.3 Hypothesis

The null and alternate hypotheses are as follows:

**H0:** There is no significant relation between protocol effectiveness and need for protocol improvement.

**H1:** There is a significant relation between protocol effectiveness and need for protocol improvement.

### 5. ANALYSIS AND RESULTS

#### 5.1 Demographic

The table below shows the demographic used for the survey.

**Table 1: Demographics**

Serial number	Classification	Categories	Frequency	Percentage
1	Age	18-21	16	33.3%
		22-25	20	41.7%
		Above 25	12	25%
		TOTAL	48	100%
2	Gender	Male	22	45.8%
		Female	26	54.2%
		Other	0	0%
		TOTAL	48	100%
2	Profession	Student	38	79.2%
		Faculty	10	20.8%
		TOTAL	48	100%
The demographics for the study are shown above. Out of the usable responses, the majority of them were people between the age range 22 to 25, female students.				

#### 5.2 Preferred Mode of Study

**Table 2: Effective Study Mode vs. Preferred Study Mode**

		Effective	Preferred
N	Valid	30	30
	Missing	0	0
Mode		1.00	1.00
Using descriptive analysis to finding the statistical mode yielded the above result.			

Table 2 shows the frequency in the modes of study, both effective study modes and preferred study modes. “No comments”, “1” represented “Offline”, “2” represented “Online”, and “3” represented “Hybrid”. By using central tendency function, the above analysis showed that offline mode of study was considered to be both effective and the preferred mode

of studying during the pandemic.

### 5.3 Correlation between Protocol Adherence and Protocol Improvement Need

**Table 3: Correlation between Protocol Adherence and Protocol Improvement**

		Protocol Adherence	Protocol Improvement
Protocol adherence	Pearson Correlation	1	.365*
	Sig. (2-tailed)		.011
	N	48	48
Protocol improvement	Pearson Correlation	.365*	1
	Sig. (2-tailed)	.011	
	N	48	48
*. Correlation is significant at the 0.05 level (2-tailed).			

The above analysis was performed using correlation, with 0.05 as the significance level

From Table 3, the Correlation Coefficient was observed to be 0.365. This meant that there was a weak positive correlation between protocol adherence and need for protocol improvement. The more the people adhered to the protocols, the more they sought improvements in them. Therefore, the alternate hypothesis is accepted and there is a significant relation between protocol adherence and improvement.

## 6. DISCUSSIONS

From the literature review, it can be noted that the change to online or hybrid mode of learning is necessary for the protection of both the students and faculty from the effect of the COVID-19 virus, which is known to spread at a distance less than one meter. This change brings about a set of problems to learning. The students face internet connection issues and other distractions which prevent them from attentively listening to the lecture being taken. The faculty face internet connection problems too, coupled with the need to adapt their teaching methods.

The demographic analysis of the survey yields an interesting fact about the respondents. As the majority of the respondents are female students, it can be said that female students in higher education institutes value the need for a conversation surrounding protocol adherence and the associated need for improvement, more than their male counterparts.

While the change to offline and hybrid modes of learning ensures the safety of the students and staff of higher education institutions, the study shows that there is still a hankering for the old ways of offline learning. A lot of students and staff feel unsatisfied with virtual and hybrid learning; the crucial element of direct interaction is missing. Humans are social creatures and in order for development to be effective, direct social interactions are absolutely crucial. When it comes to learning, the presence of physical distance can act as a barrier to knowledge transfer. This barrier, in addition to the other barriers like network issues, can cause a divide between the student and the faculty. That is why offline learning is preferred even in dangerous times like the COVID-19 pandemic.

The results also show that concerns over protocol improvement have an association with the adherence to pandemic protocol exhibited by a person. If the person is diligent in following the protocols to a tee, they will gradually look for improvements in the existing protocols, in order to better avoid the virus. Whereas, a nonchalant individual who disregards or pays little attention to pandemic protocols, will naturally be ambivalent to protocol improvements.

Therein lies the need for effective change management. If higher education institutions fail to convert the students

and faculty to a new way of learning or ensure that adherence is maintained, it is important to find ways for better integration of change. It is important to get the “unfreeze” and “change” stages of Lewin’s change model right, before going to the “refreeze” stage. The many cases of COVID-19 infection rates rising with reopening institutions prove that even though there is a preference for in-person learning, it needs to be done in a way that reinforces pandemic protocol adherence. Improvements to protocols can be made to ensure that proper learning is available at minimum risk to health.

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